4. GETTING CONTROL OF THE PROBLEM — YOUR CONSEQUENCE MANAGEMENT PLAN

No matter how well you have assessed the risk of Y2K problems and addressed them in your own jurisdiction, you need to have a Y2K Consequence Management Plan. That way, you will be prepared for what might happen if Year 2000-related problems actually occur despite efforts to avoid or prevent them. Such a plan, which deals with the consequences rather than the causes of a failure, will help you to:

- Reduce the number of decisions to be made during response and recovery operations
- Provide and restore critical services quickly
- Minimize the impact on public safety and health
- Restore all your jurisdiction's services in a timely and cost-effective manner

Where to begin? Often the first step is the most difficult. Here is a suggested approach. Fill in the blanks with the organizations, facilities, and resources that apply to you. You probably have done some of these things already and can fill in many blanks without doing further research.

As you follow these steps, remember to work with all of your communities' critical service providers. Encourage them to take steps to ensure that all of their critical systems are Y2K compliant.

Gathering Information for Your Plan

Step 1. Identify the Potential Impact on Your Jurisdiction

Imagining the results of these outages can help you start planning for them. (Also see the Vulnerability Analysis in *Section 2*.)

Power

Loss of electrical power

_____

_____

Loss of natural gas

_____

_____

Communications

Loss of telephones/pagers/radios

_____

_____

Loss of sirens/EAS

_____

_____

Water and Sewage

Interruption in water supply

_____

_____

Problems with sewage service

_____

_____

Emergency Services

911 service

Fire service vehicles and equipment

Law enforcement vehicles and equipment

Mutual aid resources

Emergency Operations Center

Medical

Ambulance vehicles and equipment

Hospital systems and equipment

Nursing homes

_____

_____

Public Works and Facilities

Street and traffic lights

_____

_____

Vehicles and equipment

_____

_____

Airports

_____

_____

Government buildings

_____

_____

Correctional facilities

_____

_____

Schools

_____

_____

Step 2. Identify Potential Community Resources

Identify and designate backup resources in the event that primary systems fail.

Generators for backup power for critical facilities

_____

_____

_____

Alternate methods of communications

_____

_____

_____

Food supplies

_____

_____

_____

Shelters that have backup power

_____

_____

_____

Transportation services (and fuel for them)

_____

_____

_____

Step 3. Promote Interdepartmental Teamwork

Creating a Y2K Consequence Management Plan for a jurisdiction will require working with a number of departments and agencies. They will each need their own plans and will need to be aware of the overall, coordinated jurisdictional plan.

Police Department

_____

_____

Fire Department

_____

_____

Emergency Medical Services

_____

_____

Public Works Department

_____

_____

Building Inspection Department

_____

_____

Social Services Department

_____

_____

Step 4. Work with Other Governmental Units

Infrastructure problems caused by Y2K will cross jurisdictional lines. Emergency managers will need to coordinate their planning with:

State-level departments

_____

_____

_____

County offices

_____

_____

_____

City and town offices

_____

_____

_____

School district officials

_____

_____

_____

Red Cross and other non-government organizations

_____

_____

_____

Step 5. Coordinate with Utilities and Other Businesses to Prepare

Gather information on preparedness and backup plans from:

Utility companies (including suppliers of electricity, natural gas, water, telephone, and other services)

_____

_____

_____

_____

Manufacturers and vendors of equipment you depend on

_____

_____

_____

_____

Landlords of buildings that you lease

_____

_____

_____

_____

Local businesses

_____

_____

_____

_____

Step 6. Establish Communication with the Public about Y2K

Emergency managers and other local leaders should establish themselves as reliable sources of information about Y2K and communicate what they are doing to prepare for Y2K via:

Local newspapers

_____

_____

_____

Local television stations

_____

_____

_____

Local radio stations

_____

_____

_____

Local Chambers of Commerce

_____

_____

_____

Community clubs and associations (League of Women Voters, etc.)

_____

_____

_____

Organizing the Y2K Effort

Each jurisdiction should designate a person as the Y2K Coordinator to lead all efforts. In addition, each jurisdictional department should appoint someone to assess the Y2K problem for its area. These individuals will work together to create the overall Y2K consequence management plan.

To create this plan for your jurisdiction, the Emergency Management Director or Coordinator (or his/her designated Y2K Coordinator) must obtain information from all departments within the jurisdiction. First focus on those systems identified as critical in the risk assessment process. For each critical system, evaluate the likelihood of Y2K failure or malfunction and the types of problems that could result. (See *Section 2* for a listing of *Equipment and Systems to Check for Y2K Problems*). Once the potential problem areas have been identified for your jurisdiction, the departments can develop their own plans.

In addition, members of each organization should also have a personal contingency plan, so they will be available and ready to respond if there is an emergency and will not be concerned about personal matters.

The jurisdiction's overall Y2K Consequence Management Plan should cover the following elements:

- Designation of leaders and their responsibilities, including a Recovery Team Director, a Command Center (or EOC) Coordinator, and the members of the Recovery Team
- Procedures for activating plans
- Allocation of resources, including personnel, funding, and equipment
- A Communications Plan for contacting key staff (other than by telephone)
- Documentation of procedures and instructions
- Designation of a Command Center and alternate facilities

We Already Have a Comprehensive All-Hazards Plan. Can't We Just Use It for Y2K?

You probably know that FEMA advocates a comprehensive approach to emergency planning in State and Local Guide (SLG) 101, *Guide for All-Hazard Emergency Operations Planning*. This approach is still valid for the Y2K problem; but remember that there are differences between the Y2K problem and other hazards.

What are they?

- The Y2K problem could affect many local, State, and even international jurisdictions at the same time, instead of being confined to one locale or region.
- It could affect many different systems at the same time (power, transportation, communication, finance, etc.), instead of just one or two (like a power outage).
- The size of the problem could overtax local resources, and mutual aid might not be available if neighboring jurisdictions are also affected.
- In addition, State and Federal resources may be overtaxed.
- Some of the resources you usually use could be affected by the Y2K problem. For example, emergency communication systems could be inoperable, or school shelters could be without power or heat. Any resources that depend, directly or indirectly, on computer chip electronics might be unusable.

Because of these unique features of the problem, you should at least develop a Y2K hazard-specific attachment to your emergency plan. Consider what resources might be unavailable, and what alternative provisions you could make to protect public safety and health for such critical functions as these:

- Emergency services
- Emergency Operations Centers (EOCs)
- 911 systems
- Public warning and information
- Health services
- Communications
- Utility power
- Water and sewage
- Public works and facilities
- Transportation

All plans should contain the information in the checklist below.

❑ Objective of the Plan

Each plan should specify its own objective for responding to potential problems, maintaining an acceptable level of service, and minimizing the threat to public safety, health, and critical infrastructure.

❑ Criteria and Procedures for Activating the Plan

The plan should include the criteria for activating the plan, such as a predetermined length for downtime or procedures for handling a problem in a specific area of responsibility. Describe the steps for activating the plan, such as how to contact needed employees (including alternate methods to using the commercial telephone in case service is disrupted). Many emergency management and other designated jurisdiction personnel are preparing to be on stand-by or activated in the days leading up to and following December 31, 1999.

❑ Roles, Responsibilities and Authority

Designate team leaders and members and identify their responsibilities. Provide alternates for each position in case the primary designee is unavailable. These should be consistent with your general emergency response procedures.

❑ Procedures for Operating during or after System Failures

List detailed procedures for operating if systems fail (i.e., who is to do what and by when). Explain ways to operate equipment manually or to get around the problem. For several examples of such procedures, see Table 6.

❑ Resources Available to Support Emergency Operations

List resources needed and available to implement the plan. Resources can include personnel, materials, supplies, communications, and other equipment. They may be different from those needed during normal operations.

❑ Criteria and Procedures for Returning to Normal Operations

List the steps for standing down.

❑ Estimated Cost of the Plan

Document the estimated cost of activating and implementing the plan, keeping in mind that the length and severity of the problem will affect the final costs.

❑ Testing the Plan

Conduct a hands-on run-through of the plan before it is needed to see if it works. Refine the plan by incorporating lessons learned from the drill. Many communities have held such drills and exercises already. See the web sites listed in *Section 5* for examples. Test, and test again!

❑ Post-Emergency Plan

Schedule a staff debriefing after the plan has been implemented. Any lessons learned during the response phase should be noted, and changes to the jurisdiction's plans should be made accordingly.

After Table 6, you will find an example of a Y2K Consequence Management Plan, which was prepared by a local Public Works department.

Table 6. Example Procedures for Operating during or after System Failures

Services	Areas of Concern/Impact	Backup Systems/ Contingency Plans
Emergency Services		
911	Emergency response may be delayed or prevented	Use alternate phone numbers, cell phone, radio.
Weather warning and tornado warning sirens	The system may not activate when needed or could produce false alarms	Manually activate, if possible.
Security		
Street lights	Parking lot and street security jeopardized; increased risk of crime and driving hazards	Manually activate, if possible. Secure additional security personnel available for escort service.
Lockups	Prison escapes	Perform lockdowns manually. Disable any computerized lockdown controls.
Automated door locks	Entrance/exit from offices, etc.	Distribute keys to responsible personnel. Develop plans for manual entrance/exit.
Video surveillance	Tape dating: wrong dates may be recorded	Implement manual record maintenance by security personnel.
Alarm systems	Unnecessary false alarms	Disable all but the most critical systems. Issue memos to security personnel regarding potential problems and appropriate procedures.
Power		
Municipal and public utilities and the power grid	Loss of heating/air conditioning, lighting, communications, and other amenities of daily life	Secure standby generators.
Standby generators	Loss of power with the same results as above	Manually activate standby generator. Obtain additional generators and fuel as necessary.

Services	Areas of Concern/Impact	Backup Systems/ Contingency Plans
	Communication	
PBX	Loss of internal and external communication lines	Use radios, pagers, cell phones, or couriers.
Radio	Loss of police patrol communication	Use cell phones if possible.
Pagers	Missed and erroneous pages	Use cell phones, if possible; otherwise, use periodic call-ins or face-to-face communications.
Cell phones	Missed and erroneous calls	Use radios or face-to-face communication.
Written (copiers, fax machines)	These machines may stop working	Postpone or use carbon copies if available.
	Commerce	
EDI (electronic data interchange)	Electronic supplier payments disrupted, resulting in shortages of goods and services	Write checks manually or otherwise implement pre-electronic procedures.
Electronic payroll deposit	Employee payments made through direct deposit may be late or could fail entirely	Write checks manually or pay in cash.
Credit card purchases	Purchase approval may be denied; cards could become unusable	Use manual purchase orders. Institute blank purchase orders with local merchants

Services	Areas of Concern/Impact	Backup Systems/ Contingency Plans
Transportation		
Traffic control	Traffic lights malfunction	Use police overtime, or auxiliary police force if available, to manually direct traffic.
Freeway management systems	Highway congestion	Use police overtime, send letters to the public, or place newspaper ads stressing the need for greater safety consciousness.
Trains	Railroad crossing warnings fail (warnings are controlled by microcomputer)	Send letters to the public or place newspaper articles alerting the public to the danger.
Drawbridges	Bridge crossing warnings fail or bridges fail to open and close	Warn land and water traffic; use police who are working overtime or auxiliary police to reroute traffic.
Airports	Air traffic control systems disrupted	Increase traffic intervals; require use of visual flight rules.
Airports	Timed runway lighting systems disrupted	Disable computer controls; activate manually if possible.

Services	Areas of Concern/Impact	Backup Systems/ Contingency Plans
Basic Necessities		
Water – Pumping	Pumps stop working and soon distribution pipes are empty	Prepare water trucks for emergency distribution. Encourage citizens to have bottled water handy.
Water – Cleaning	Sanitary systems quit	Use water trucks.
Water – Well management	Not available when needed	Use alternate sources of supply.
Emergency food distribution	Supermarkets closed because of power outages, etc.	List locations for assistance. Prestock essential supplies.
Health Care		
Medical devices and equipment, operating rooms	Pacemakers, lighting, etc.	Probably the best measure is to ensure that standby generators are ready. Medical triage rules should be applied.

Source: Adapted from Keane, Inc.

SAMPLE PLAN

Contingency Plan for Wastewater Collection System

The jurisdiction's Wastewater Collection System consists of 3 lift stations, light alarm systems, and gravity sewer lines.

1. Objective of the plan

To provide normal level of service.

2. Criteria and procedures for activating the plan

To ensure that electricity flows out to one or more lift stations, the Public Works Director will assign employees to monitor the system beginning on December 31, 1999, through a night shift into January 1, 2000, on an emergency basis until it is clear that there are no problems with the operation of the system. If an employee discovers a problem, then he or she will notify the Public Works Director (or designee) via (describe primary and backup communication methods for contacting the Director) and describe the nature of the problem. If needed, the Director will notify other employees to report for duty and will assign them emergency responsibilities.

3. Roles, responsibilities, and authority

The Public Works Director will be in charge of activating and implementing this contingency plan. The Director will assign workers in the department as needed. If additional personnel are needed, the Director will have the authority to use personnel from the Parks Maintenance Dept. If the Public Works Director is unavailable, the Sewer Lead Worker will assume the responsibilities of the Director as outlined in this plan.

4. Procedures for operating during or after system failures

- Portable Generators — The jurisdiction has two portable generators that can operate the lift station, and all three lift stations have a generator receptacle so that they can be run by a portable generator. Based on the amount of storage in the lines and the wetwell in the vicinity of the lift stations, the Public Works Director will assign employees to transport and hook up the portable generators to the lift stations. If all three lift stations are not working, the Director will establish a schedule to rotate the two generators among the three lift stations. If necessary, the Public Works Director will try to obtain an additional generator through mutual aid agreement or rental.

- Vacuum Truck — If the generators are not able to handle the flow, the jurisdiction can pump sewage out of the lift stations with the vacuum truck. The Public Works Director will assign employees to use this truck to pump sewage.

- Tanker Truck — The jurisdiction also may be able to pump the sewage into its tanker truck. The Public Works Director will assign employees to pump sewage using this truck.

- Lift Station Bypass — Because of the topography in the vicinity of lift station #1, we would be able to establish a line to bypass that lift station. If needed, the Public Works Director will contact a contractor to construct this line. This is not an option for lift stations #2 and #3 because the distance to a manhole, which discharges into a gravity line, is too great.

- Temporary Overflows — To avoid sewer backups in citizens' houses if the above options do not handle overflow, the jurisdiction may have to establish temporary overflows from the lift stations. The jurisdiction will work with the State Environmental Protection Agency to try to minimize the use and impact of this option.

- Water restrictions — If a jurisdiction-wide or regional power outage lasts more than 24 hours, the jurisdiction will consider restricting community water usage to reduce flow of wastewater through the system.

5. Resources available to support emergency operations

- Personnel — 3 Public Works employees for most operations. If necessary, an additional 3 employees from the Parks Maintenance Department.

- Equipment — 2 portable generators and trucks to transport them; 1 vacuum truck; 1 tanker truck with pump; pipe or hose for lift station bypasses.

6. Criteria and procedures for returning to normal operations

- Restore electricity to all three lift stations.
- Disconnect any portable generators that have been connected to the lift stations.
- Remove bypass for lift station if that was constructed.
- Clean up any temporary overflows.

7. Estimated cost of the plan

- Personnel including regular, overtime, and holiday pay for three workers for a five-day period: $2,000–$3,000.
- Generator rental at $100/day, 5 days: $500. (Purchase of generator–$30,000)
- Construction of bypass–$500.

8. Testing the plan

Prior to December 31, 1999, the Public Works Department will provide training to its employees and the Parks Department employees on how to implement this plan.

9. Post-emergency plan

The Public Works Director will meet with the personnel who assisted in implementing the plan to determine how it worked. If necessary, changes will be made to the plan for future emergencies.

Prepared by: _____ Date: _____
PRINT

Department/Agency Head: _____ Date: _____
SIGNATURE

Resources for Helping the Public Prepare for Y2K

The general public has understandable concerns regarding Y2K. You can help them prepare for Y2K by being a credible source of information. Tell them about the potential effects of Y2K in their area, and about prudent actions they can take to be prepared.

The President's Council on Year 2000 Conversion has expanded its web site http://www.y2k.gov/, creating a separate area devoted to consumer issues and the Y2K problem. The information in this part of the site is similar to that described in the next paragraph, but users can also link directly to the agencies, companies, and industry groups that are the primary sources for much of the existing information on Y2K efforts.

Individuals can also call the number **1-888-USA-4-Y2K** to get information about power, telephones, banking, government programs, household products, and other common topics. This information comes from primary sources — government agencies, companies, or industry groups. Information specialists, supported by researchers, are available to provide additional information to callers. Pre-recorded information is available seven days a week, 24 hours a day. Information specialists staff the line from 9 AM to 8PM (EST), Monday through Friday. The service also has "FAX-back" capability.

The Federal Trade Commission (FTC) also has Y2K publications for consumers on consumer electronic products, home office equipment, and personal finances. These publications are available on-line at http://www.ftc.gov and through FTC's Consumer Response Center at 202-FTC-HELP. It also has a Business Fact Sheet urging businesses to disclose the Y2K status of their products to their consumers.

Assistance is also available for small businesses and service providers. The Small Business Administration (SBA), the National Institute for Standards and Technology's Manufacturing Extension Program, and the President's Council on Year 2000 Conversion have compiled many Y2K tools for small businesses and critical service providers. Information about these tools can be found on their web sites: http://www.sba.gov/, http://www.mep.nist.gov/, and http://www.Y2K.gov/. Small- and medium-sized businesses can also call 1-800-U-ASK-SBA for information on Y2K.

In addition, almost every State has several web pages devoted to the Y2K problem. These pages generally provide State-specific information, additional planning guidance, tools and procedures, and links to other Y2K-related web sites.

You probably will be asked how the public should prepare for the possible effects of Y2K. Advise them to prepare for limited interruptions in critical services, like those caused by winter storms. To help them prepare, you can distribute brochures with basic information. To get these camera-ready brochures free from FEMA and the American Red Cross, call 1-800-480-2520, or write to: *FEMA, PO Box 70274, Washington, D.C. 20024* for copies of the following documents:

- *Your Family Disaster Plan* —
  How to prepare for any type of disaster

- *Your Family Disaster Supplies Kit* —
  A checklist of emergency supplies

- *Emergency Preparedness Checklist* —
  An action checklist on disaster preparedness

- *Helping Children Cope with Disaster* —
  How to help children deal with the stress of disaster

All four documents are available in Spanish. You can find these helpful documents and others on-line (see *Section 5*). Also check the American Red Cross web site listed in *Section 5* for specific information about preparing for Y2K. These preparations should include:

- Checking with manufacturers of any essential computer-controlled equipment in the home
- Preparing supply kits for family disasters
- Checking home smoke alarms and buying extra batteries
- Keeping a battery-operated radio or television available to be able to receive emergency television